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(54) BLOOD-SUGAR LEVEL CONTROL SYSTEM

(57) Abstract:

PROBLEM TO BE SOLVED: To continuously monitor a blood-sugar level noninvasirely by providing an injection means and a liquid injection quantity control means in a device which directly irradiates the light on the living body and measures the living substance density based on a transmitted light, a scattered light, or a photoacoustic signal generated from the living body.

SOLUTION: A semiconductor laser 1 and a photo detector 2 are so installed that the both optic axes are coincided with each other and near infrared rays are directly irradiated on a sample (a living body) 3 inserted between them. The output of the photo detector 2 is input in a computer 7 via an amplifier 6 so that glucose density (namely, the blood-sugar level) is calculated, and the result is displayed on a display 8 and at the same time stored in a storage device 9. Insulin feeding quantity is optimized according to the measured glucose density and after the signal based on the insulin quantity is input into a liquid injection quantity controller 10, a liquid injection device 11 is actuated so as to automatically inject insulin into the sample (the living body) 3 via a needle 12.